IN THE CLAIMS:

Please amend claims 1, 37, 57-65, 69-74, 87-90, and 101-106 herein. Please add new claims 116-119. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A fire suppression system, comprising:

a chamber and at least one gas generant housed therein, the at least one gas generant comprising a non-azide or a non-azole composition formulated to pyrotechnically produce an inert gas mixture comprising carbon dioxide at a concentration less than or equal to the Immediately Harmful to Life or Health concentration of carbon dioxide,

the fire suppression system configured to dispel, at an exit thereof, the inert gas mixture to provide a dispelled inert gas mixture into a space, the dispelled inert gas mixture comprising carbon dioxide in a concentration ~~less than or~~ substantially equal to the concentration pyrotechnically produced by the at least one gas generant.

2. (Previously Presented) The fire suppression system of claim 1, further comprising an igniter composition in contact with the at least one gas generant.

3. (Previously Presented) The fire suppression system of claim 1, further comprising a heat management system positioned and configured to reduce a temperature of the inert gas mixture.

4. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

5. (Previously Presented) The fire suppression system of claim 1, wherein the at

least one gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

6. (Canceled)

7. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to produce less than 1 percent of an original weight of the at least one gas generant in particulates or smoke.

8. (Previously Presented) The fire suppression system of claim 4, wherein substantially all of the at least one gaseous combustion product forms the inert gas mixture.

9. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the at least one gas generant.

10. (Previously Presented) The fire suppression system of claim 4, wherein the at least one solid combustion product is a slag.

11. (Original) The fire suppression system of claim 1, wherein the inert gas mixture comprises nitrogen and water.

12. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant comprises an oxidizer, a fuel, and a binder.

13. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant is formed into a geometry that provides a neutral burn when combusted.

14. (Previously Presented) The fire suppression system of claim 1, wherein the at

least one gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, and a binder.

15. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

16. (Previously Presented) The fire suppression system of claim 1, wherein the at least one gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

17. (Canceled)

18. (Previously Presented) The fire suppression system of claim 3, wherein the heat management system comprises a heat sink.

19. (Previously Presented) The fire suppression system of claim 3, wherein the heat management system comprises a phase change material.

20. (Original) The fire suppression system of claim 19, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

21. (Original) The fire suppression system of claim 19, wherein the fire suppression system is configured to transfer heat from the inert gas mixture to the phase change material.

22. (Previously Presented) The fire suppression system of claim 1, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the at least one gas generant.

23. (Original) The fire suppression system of claim 1, further comprising at least one diffuser plate to disperse the inert gas mixture.

24. (Previously Presented) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into a heat management system.

25. (Original) The fire suppression system of claim 23, wherein the at least one diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

26. (Previously Presented) The fire suppression system of claim 3, wherein the gas generant is configured into at least one pellet and is present in a combustion chamber and wherein the heat management system comprises an effluent train.

27. (Previously Presented) The fire suppression system of claim 26, wherein the combustion chamber comprises an igniter composition in contact with the at least one gas generant.

28. (Previously Presented) The fire suppression system of claim 27, wherein the igniter composition is formulated and of sufficient mass to produce an amount of heat sufficient to ignite the at least one gas generant.

29. (Withdrawn) The fire suppression system of claim 27, wherein the igniter composition comprises from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

30. (Withdrawn) The fire suppression system of claim 27, wherein the igniter composition comprises strontium nitrate, magnesium, and an organic binder.

31. (Original) The fire suppression system of claim 27, wherein the igniter composition is formulated to produce solid combustion products when combusted.

32. (Original) The fire suppression system of claim 26, wherein the at least one pellet is formed into a shape that provides a neutral burn.

33. (Original) The fire suppression system of claim 26, wherein the at least one pellet further comprises an igniter composition.

34. (Previously Presented) The fire suppression system of claim 33, wherein the igniter composition and the at least one gas generant are compressed together in the at least one pellet.

35. (Previously Presented) The fire suppression system of claim 26, wherein the at least one pellet has a total mass sufficient to produce an amount of the inert gas mixture sufficient to extinguish a fire.

36. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant is formulated to produce minimal amounts of carbon monoxide, particulates, or smoke when combusted.

37. (Currently Amended) The fire suppression system of claim 26, wherein the at least one gas generant is formulated to produce less than an Immediately Harmful to Life or Health concentration of ammonia, carbon monoxide, ~~carbon dioxide,~~ or nitrogen oxides and less than 1 percent of an original weight of the at least one gas generant in particulates or smoke.

38. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant is formulated to produce at least one gaseous combustion product and at least one solid combustion product when combusted.

39. (Previously Presented) The fire suppression system of claim 38, wherein substantially all of the at least one gaseous combustion product forms the inert gas mixture.

40. (Previously Presented) The fire suppression system of claim 38, wherein the at least one solid combustion product is formulated to minimize production of particulates during combustion of the at least one gas generant.

41. (Previously Presented) The fire suppression system of claim 38, wherein the at least one solid combustion product produced by combustion of the at least one gas generant is a slag.

42. (Original) The fire suppression system of claim 41, wherein the slag is present on a surface of the at least one pellet.

43. (Original) The fire suppression system of claim 26, wherein the inert gas mixture comprises nitrogen and water.

44. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant comprises an oxidizer, a fuel, and a binder.

45. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant further comprises at least one of an oxidizing agent, an ignition enhancer, a ballistic modifier, a slag enhancing agent, a cooling agent, or a binder.

46. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant comprises hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

47. (Previously Presented) The fire suppression system of claim 26, wherein the at least one gas generant comprises hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide,

and polyacrylamide.

48. (Original) The fire suppression system of claim 26, wherein the heat management system is configured to reduce the temperature of the inert gas mixture.

49. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a heat sink.

50. (Original) The fire suppression system of claim 26, wherein the heat management system comprises a phase change material.

51. (Original) The fire suppression system of claim 50, wherein the phase change material comprises lithium nitrate, sodium nitrate, potassium nitrate, or mixtures thereof.

52. (Original) The fire suppression system of claim 50, wherein heat from the inert gas mixture is transferred to the phase change material.

53. (Previously Presented) The fire suppression system of claim 26, wherein the fire suppression system is configured to disperse the inert gas mixture therefrom within from approximately 20 seconds to approximately 60 seconds after ignition of the at least one gas generant.

54. (Original) The fire suppression system of claim 26, further comprising at least one diffuser plate to disperse the inert gas mixture.

55. (Original) The fire suppression system of claim 54, wherein the at least one diffuser plate is configured and positioned to diffuse the inert gas mixture into the heat management system.

56. (Original) The fire suppression system of claim 54, wherein the at least one

diffuser plate is configured and positioned to disperse the inert gas mixture exiting from the fire suppression system.

57. (Currently Amended) A method for fighting a fire in a space, comprising:

igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprising carbon dioxide ~~at a concentration less than or equal to the Immediately Harmful to Life or Health value~~; and

dispersing the inert gas mixture into a space to extinguish a fire, the dispersed inert gas mixture comprising carbon dioxide in a concentration ~~less than or~~ substantially equal to the concentration ~~pyrotechnically~~ produced by ignition of the at least one gas generant such that the space comprises carbon dioxide at a concentration less than or equal to the Immediately Harmful to Life or Health concentration of carbon dioxide.

58. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises pyrotechnically igniting the at least one non-azide or non-azole gas generant to produce the inert gas mixture.

59. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises igniting the at least one non-azide or non-azole gas generant to produce nitrogen and water.

60. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises igniting the at least one ~~nonazide~~ non-azide or non-azole gas generant composition to produce gaseous combustion products and solid combustion products.

61. (Currently Amended) The method of claim 60, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises forming the inert gas mixture with substantially all of the gaseous combustion products produced by the at least one gas generant.

62. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises generating gaseous combustion products within from approximately 20 seconds to approximately 60 seconds after ignition of the at least one non-azide or non-azole gas generant.

63. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing gaseous combustion products that are substantially free of nitrogen oxides.

64. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing a neutral burn of the at least one non-azide or non-azole gas generant.

65. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises igniting an igniter composition to produce sufficient heat to ignite the at least one non-azide or non-azole gas generant.

66. (Withdrawn) The method of claim 65, wherein igniting an igniter composition comprises igniting an igniter composition comprising from approximately 15% to approximately 30% boron and from approximately 70% to approximately 85% potassium nitrate.

67. (Withdrawn) The method of claim 65, wherein igniting an igniter composition comprises igniting the igniter composition comprising strontium nitrate, magnesium, and an organic binder.

68. (Canceled)

69. (Currently Amended) The method of claim 57, wherein igniting at least one non-

azide or non-azole gas generant to produce an inert gas mixture comprises producing solid combustion products that minimize the particulates and the smoke formed by the at least one non-azide or non-azole gas generant.

70. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

71. (Currently Amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

72. (Currently Amended) The method of claim 57, wherein dispersing the inert gas mixture into a space comprises dispersing the inert gas mixture into the space within from approximately 20 seconds to approximately 60 seconds after ignition of the at least one non-azide or non-azole gas generant.

73. (Currently Amended) The method of claim 57, further comprising reducing a temperature of the inert gas mixture after combustion of the at least one non-azide or non-azole gas generant.

74. (Currently Amended) The method of claim 73, wherein reducing a temperature of the inert gas mixture after combustion of the at least one non-azide or non-azole gas generant comprises exposing the inert gas mixture to a heat management system.

75. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture into a heat sink.

76. (Original) The method of claim 74, wherein exposing the inert gas mixture to a heat management system comprises flowing the inert gas mixture over a phase change material.

77. (Original) The method of claim 57, further comprising extinguishing the fire by reducing an oxygen content in the space.

78. (Original) The method of claim 77, wherein extinguishing the fire by reducing an oxygen content in the space comprises reducing the oxygen content to approximately 13% by volume.

79. (Previously Presented) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

80. (Previously Presented) The fire suppression system of claim 15, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

81. (Previously Presented) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

82. (Previously Presented) The fire suppression system of claim 16, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

83. (Withdrawn) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

84. (Withdrawn) The fire suppression system of claim 46, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

85. (Withdrawn) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate is recrystallized.

86. (Withdrawn) The fire suppression system of claim 47, wherein the hexa(ammine)cobalt(III)-nitrate comprises less than approximately 0.1% of activated charcoal or carbon.

87. (Withdrawn-currently amended) The method of claim 70, wherein igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the at least one non-azide or non-azole gas generant comprising recrystallized hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide.

88. (Withdrawn-currently amended) The method of claim 70, wherein igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate, cuprous oxide, and titanium dioxide comprises igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate having less than approximately 0.1% of activated charcoal or carbon, cuprous oxide, and titanium dioxide.

89. (Withdrawn-currently amended) The method of claim 71, wherein igniting the at least one gas non-azide or non-azole generant comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the at least one non-azide or non-azole gas generant comprising recrystallized hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide.

90. (Withdrawn-currently amended) The method of claim 71, wherein igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate, cupric oxide, titanium dioxide, and polyacrylamide comprises igniting the at least one non-azide or non-azole gas generant comprising hexa(ammine)cobalt(III)-nitrate having less than approximately

0.1% of activated charcoal or carbon, cupric oxide, titanium dioxide, and polyacrylamide.

91-93. (Canceled)

94. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant comprises hexa(ammine)cobalt(III)nitrate and guanidine nitrate.

95. (Withdrawn) The fire suppression system of claim 94, wherein the at least one gas generant comprises from approximately 1% to approximately 5% guanidine nitrate.

96. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

97. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

98. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

99. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

100. (Withdrawn) The fire suppression system of claim 1, wherein the at least one gas generant is formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 300 parts per million of ammonia.

101. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

102. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

103. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

104. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

105. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 300 parts per million of ammonia.

106. (Withdrawn-currently amended) The method of claim 57, wherein igniting at least one non-azide or non-azole gas generant to produce an inert gas mixture comprises producing the inert gas mixture comprising less than approximately 1% by weight of the at least one gas generant in particulates or smoke.

107. (Withdrawn) A fire suppression system, comprising:

at least one gas generant formulated to pyrotechnically produce an inert gas mixture comprising less than approximately 4% by volume of carbon dioxide, the at least one gas generant comprising hexa(ammine)cobalt(III)nitrate and guanidine nitrate,

the fire suppression system configured to dispense, at an exit thereof, the inert gas mixture comprising carbon dioxide in a concentration substantially equal to the concentration pyrotechnically produced by the at least one gas generant.

108. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant comprises from approximately 1% to approximately 5% guanidine nitrate.

109. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

110. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 0.12% by volume of carbon monoxide.

111. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 100 parts per million of nitric oxide.

112. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 20 parts per million of nitrogen dioxide.

113. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to pyrotechnically produce the inert gas mixture comprising less than approximately 300 parts per million of ammonia.

114. (Withdrawn) The fire suppression system of claim 107, wherein the at least one gas generant is formulated to produce less than 1 percent of an original weight of the at least one gas generant in particulates or smoke.

115. (Previously Presented) The fire suppression system of claim 1, wherein the fire suppression system is configured to dispel, at the exit thereof, the inert gas mixture comprising less than approximately 4% by volume of carbon dioxide.

116. (New) A fire suppression system, comprising:

a chamber and at least one non-azide or non-azole gas generant housed therein, the at least one non-azide or non-azole gas generant formulated to pyrotechnically produce a first gas mixture comprising carbon dioxide,

the fire suppression system configured to dispel, at an exit thereof, the first gas mixture and a second gas mixture comprising carbon dioxide into a space to provide carbon dioxide at a concentration less than or equal to the Immediately Harmful to Life or Health concentration of carbon dioxide in the space.

117. (New) A fire suppression system, comprising:

a chamber and at least one non-azide or non-azole gas generant housed therein, the at least one non-azide or non-azole gas generant formulated to pyrotechnically produce an inert gas mixture comprising carbon dioxide at a concentration less than or equal to the Immediately Harmful to Life or Health concentration of carbon dioxide,

the fire suppression system configured to dispel, at an exit thereof, at least a portion of the inert gas mixture, the dispelled inert gas mixture comprising carbon dioxide in a concentration equal to the concentration pyrotechnically produced by the at least one non-azide or non-azole gas generant.

118. (New) A fire suppression system, comprising:

a chamber and at least one gas generant housed therein, the at least one gas generant comprising

a non-azide or a non-azole composition formulated to pyrotechnically produce an inert gas mixture comprising carbon dioxide,

the fire suppression system configured to dispel, at an exit thereof, the inert gas mixture as pyrotechnically produced into a space, the space comprising carbon dioxide at less than approximately 4% by volume.

119. (New) The fire suppression system of claim 118, wherein the fire suppression system is configured to dispel, at the exit thereof, the inert gas mixture comprising less than approximately 1% by volume of carbon dioxide.